

Amendments to the Specification:

Please replace the paragraph beginning at page 2, line 2, with the following rewritten paragraph:

-- Some of these film carrier tapes are required to plate the outer leads with solder which is an alloy of tin and lead. Since solder contains lead which is a heavy metal, recently it has ~~become~~ ~~being~~ begun to be replaced with a tin-bismuth alloy under the recent global request of eliminating lead from use. An addition of bismuth lowers a melting point of tin-bismuth alloy, just like lead metal does in tin-lead (Pb) solder. Therefore, it had been thought that ~~it would be able to treat~~ ~~tin-bismuth alloy solder~~ could be treated equally with tin-lead (Pb) solder by optimizing a content of bismuth in the alloy. --

Please replace the paragraph beginning at page 3, line 19, with the following rewritten paragraph:

-- The distance between the electroplating tank and the washing tank causes no problem in tin-lead solder plating where no substitution occurs between tin and lead metals. However, it will cause a problem in the plating of tin-bismuth alloy. That is, after the film carrier tape exits the electroplating tank, bismuth in the plating solution remaining on the tape will substitute with tin present near the surface of tin-bismuth alloy deposit. As a consequence, a surface of the alloy deposit will be modified because a composition in the vicinity of the surface is altered. Therefore, tin-bismuth alloy deposit will ~~have highest~~ have the highest bismuth content near the surface where tin has been substituted with bismuth. Accordingly, the tin-bismuth alloy deposit will ~~become~~ come to have different melting points in the deposit along its thickness direction. --

Please replace the paragraph beginning at page 6, line 15, with the following rewritten paragraph:

-- In the production method of a film carrier tape according to the invention, the film carrier tape is washed within 6 seconds after the film carrier tape ~~exit~~ exits the plating tank to remove the plating solution which remains on the surface of the

film carrier tape. By controlling the time for which the film carrier tape is subjected to contact with the plating solution within 6 seconds after exiting the plating tank, a substitution may be substantially prevented from occurring between bismuth in the plating solution and tin in a tin-bismuth alloy deposit formed at lead portions of the film carrier tape. --

Please replace the paragraph beginning at page 7, line 10, with the following rewritten paragraph:

-- ~~Fig. 2 is a set of Figs. 2(a) - 2(h)~~ are sectional views, taken on line A-A of Fig. 1, showing steps of the production of the film carrier tape according to the invention; --

Please replace the paragraph beginning at page 15, line 20, with the following rewritten paragraph:

-- At a sidewall 43 upstream of the traveling direction of the film carrier tape 10, the plating tank 42 has the slit inlet opening 50 through which the film carrier tape 10 is continually ~~enters~~ entering the plating tank 42. At a sidewall 44 downstream of the traveling direction of the film carrier tape 10, the plating tank 42 has the slit outlet opening 51 through which the film carrier tape 10 exits the plating tank 42. --

Please replace the paragraph beginning at page 20, line 24, with the following rewritten paragraph:

-- To prevent the water ejected from the washing nozzles 61 from scattering, the plating apparatus 40 is preferably provided with receivers 62 which extend aside from both surfaces of the film carrier tape 10 in the parallel direction. Since the washing nozzles 61 eject washing water along the traveling direction of the film carrier tape 10, the receivers 62 will be provided at any downstream point of the traveling direction of the film carrier tape 10 past the washing nozzles 61. The receivers 62 can be arranged to connect the plating tank 42 with the ~~washing tank 61~~ washing tank 60. The width between the receivers 62 is nearly equal to or greater than the width of the film carrier tape 10 to be washed. By impinging on the receivers 62, ~~it can be prevented that the water is scattered~~ can be prevented from

scattering around, and the removal of the plating solution remaining on the film carrier tape 10 can be enhanced. --

Please replace the paragraph beginning at page 21, line 15, with the following rewritten paragraph:

-- The washing water ejected from the washing nozzles 61 is collected for disposal in a water collection device (not shown) positioned below the ~~receivers 61~~ receivers 62. --

Please replace the paragraph beginning at page 23, line 12, with the following rewritten paragraph:

-- As such, the outer leads 15b need to be provided with a tin-bismuth alloy deposit having a constant melting point to electrically connect with various kinds of wirings. Therefore the tin-bismuth alloy deposit 19 should have ~~an uniform~~ a uniform bismuth content ~~overall~~ over all of the deposit. To achieve this requirement, the plating solution remaining on the tin-bismuth alloy deposit 19 has to be washed off before a substitution reaction between bismuth in the plating solution and tin in the alloy deposit 19 proceeds. The film carrier tape is washed to remove the plating solution within 6 seconds, and preferably within 5 seconds after the film carrier tape exits the plating tank through the slit outlet opening. --

Please replace the paragraph beginning at page 24, line 3, with the following rewritten paragraph:

-- After the tin-bismuth alloy deposit 19 has been formed on the outer leads 15b on an edge portion of one side of the insulating film 11 by the solution surface level control, the tin-bismuth alloy deposit 19 is formed on the outer leads 15b on the opposite edge portion of the insulating film 11 in a similar procedure as described above. To accomplish this converse side plating, the film carrier tape which has been washed in the washing tank 60 will be stood ~~up-downside up~~ up upside down, i.e., so that the edge portion of the insulating film where the tin-bismuth alloy deposit 19 is newly desired positions downward. Thereafter, the outer leads 15b on that side of the film carrier tape are soaked in the plating solution 41. Also in this case, the

plating solution remaining on the film carrier tape will be washed off with the water jet applied from the washing nozzles 61 within 6 seconds, and preferably within 5 seconds after the plating with the tin-bismuth alloy has been completed. --

Please replace the paragraph beginning at page 25, line 20, with the following rewritten paragraph:

-- In the plating apparatus described above, the standing film carrier tape is soaked in the level-controlled plating solution so that the tin-bismuth alloy deposit can be selectively formed on the connection leads in the vicinity of the longitudinal edge portions of the film carrier tape. However, the plating apparatus of the invention is not limited to this embodiment where the standing film carrier tape is plated on selected parts, ~~and it is needless to say that the plating apparatus and, needless to say, it is possible to carry out the plating process of the invention is possible to carry out the plating~~ on the entire surface without the solution surface level control. It is also possible to arrange the slit inlet opening and the slit outlet opening parallel to the surface level of the plating solution. Although the plating apparatus of the invention has been described based on the embodiment where the plating solution for plating the tin-bismuth alloy is charged in the plating tank, the plating solution which can be charged in the plating tank is not limited thereto, and any plating solutions commonly employed in the electroplating and the electroless plating of such as nickel, gold, palladium, tin and tin-lead alloy, may be used. The plating apparatus of the invention may be favorably used with these plating solutions since it is desirable that these plating solutions are washed off as soon as possible after a plated article is carried out from the plating tank. --

Please replace the paragraph beginning at page 29, line 22, with the following rewritten paragraph:

-- After the tin-bismuth alloy deposit was formed with the solution surface level control as described above, the film carrier tape was exited through the slit outlet opening. The film carrier tape was washed with water using two washing nozzles within one second after ~~exited exiting~~ through the slit outlet opening. To prevent the splash of water ejected from the two washing nozzles, receivers consisting of an

acrylic resin plate were arranged in the vicinity of the washing nozzles along the film carrier tape. --

Please replace the paragraph beginning at page 30, line 13, with the following rewritten paragraph:

-- A time period required for the film carrier tape to enter the washing tank after ~~exited~~ exiting the plating tank through the slit outlet opening was 10 seconds. --

Please replace the paragraph beginning at page 31, line 3, with the following rewritten paragraph:

-- Subsequently, the film carrier tape exited the plating tank through the slit outlet opening. The film carrier tape was washed with water using two washing nozzles within one second after ~~exited~~ exiting the plating tank through the slit outlet opening. Thereafter, the film carrier tape entered the washing tank for further washing, then was dried and wound on a reel together with an embossed tape as a spacer. --

Please replace the paragraph beginning at page 31, line 16, with the following rewritten paragraph:

-- A film carrier tape was produced according to the same procedure with Example 1 except that the film carrier which exited the plating tank through the slit outlet opening ~~was directly~~ directly entered the washing tank without being washed with water by means of the washing nozzles. The film carrier tape which exited the plating tank through the slit outlet opening was subjected to contact with the plating solution remaining on the tape for 8 seconds before it reached the washing tank. --

Please replace the paragraph beginning at page 32, line 4, with the following rewritten paragraph:

-- Film carrier tapes were produced according to the same procedure as Example 1 except that the film carrier tapes which exited the plating tank through the slit outlet opening ~~was subjected~~ were subjected to contact with the plating solution remaining on the tapes for 2 seconds (Example 2), 3 seconds (Example 3), 4 seconds (Example 4), 5 seconds (Example 5), 6 seconds (Example 6), 7 seconds {W0186903.1}

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(Comparative Example 2), or 8 seconds (Comparative Example 3) before ~~it was they~~
were washed with water by means of the washing nozzles. --